

What is claimed is:

1. A water softening device, comprising:

at least a first water softener and a second water softener;

at least one regeneration chamber for conducting regeneration of each of

said first water softener and said second water softener;

a control device for controlling the flow of raw water to each of said first water softener and said second water softener and for controlling regeneration;

a hardness detection device for detecting hardness of treated water of said water softener; and

said control device controlling the flow of raw water and the regeneration of each of said first water softener and said second water softener based on a hardness detection signal from said hardness detection device.

2. A water softening device as described in Claim 1, further comprising:

a sampling mechanism that samples treated water from inside a resin layer of said first water softener and said second water softener;

said hardness detection device detects the hardness of treated water sampled by said sampling mechanism.

3. A water softening device as described in Claim 1, further comprising:

a non-regenerating polisher is provided downstream of said first water softener and said second water softener with respect to flow of raw water through said water softening device.

5 4. A water softening device as described in Claim 2, further comprising:

a non-regenerating polisher is provided downstream of said first water softener and said second water softener with respect to flow of raw water through said water softening device.

5 A water softening device as described in Claim 1, wherein:

10 said first water softener and said second water softener are placed in a parallel arrangement with respect to water flow.

6. A water softening device as described in Claim 5, wherein:

water flows alternately through said first water softener and said second water softener; and

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said control device performs regeneration of one of said first water softener and said second water softener when the other of said first water softener and said second water softener has water flow therethrough.

7. A water softening device as described in Claim 1, wherein:

5 said at least one regeneration chamber is one regeneration chamber common to said first water softener and said second water softener.

8 A water softening method, comprising:

 providing at least a first water softener and a second water softener;

 conducting regeneration of each of said first water softener and said
10 second water softener by using at least one regeneration chamber;

 controlling the flow of raw water to each of said first water softener and
 said second water softener by using a control device;

 controlling regeneration of each of said first water softener and said
 second water softener by using said control device;

15 detecting hardness of treated water of said water softener with a hardness
 detection device;

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said control device controlling the flow of raw water and the regeneration of each of said first water softener and said second water softener based on a hardness detection signal from said hardness detection device.

9. A water softening method as described in Claim 8, further comprising:

sampling treated water from inside a resin layer of said first water softener and said second water softener; and

detecting the hardness of treated water sampled by said sampling mechanism.

10. A water softening method as described in Claim 8, further comprising:

treating water downstream of said first water softener and said second water softener with respect to flow of raw water through said first water softener and said second water softener with a non-regenerating polisher.

11. A water softening method as described in Claim 9, further comprising:

treating water downstream of said first water softener and said second water softener with respect to flow of raw water through said first water softener and said second water softener with a non-regenerating polisher.

12 A water softening method as described in Claim 8, wherein:

said first water softener and said second water softener are placed in a parallel arrangement with respect to raw water flow.

13. A water softening method as described in Claim 12, wherein:

water flows alternately through said first water softener and said second water softener; and

said control device performs regeneration of one of said first water softener and said second water softener when the other of said first water softener and said second water softener has water flow therethrough.

14. A water softening method as described in Claim 8, wherein:

said at least one regeneration chamber is one regeneration chamber common to said first water softener and said second water softener.

15. A water softening device, comprising:

at least a first water softener and a second water softener placed in a parallel arrangement with respect to raw water flow;

at least one regeneration chamber for conducting regeneration of each of said first water softener and said second water softener;

a control device for controlling the flow of raw water to each of said first water softener and said second water softener and for controlling regeneration;

5 a hardness detection device for detecting hardness of treated water of said water softener;

water flows alternately through said first water softener and said second water softener; and

10 said control device performs regeneration of one of said first water softener and said second water softener when the other of said first water softener and said second water softener has water flow therethrough, whereby the flow of raw water and the regeneration of each of said first water softener and said second water softener based on a hardness detection signal from said hardness detection device.

15 16. A water softening device as described in Claim 15, wherein:

said at least one regeneration chamber is one regeneration chamber common to said first water softener and said second water softener.

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17. A water softening device as described in Claim 15, further comprising:

a sampling mechanism that samples treated water from inside a resin layer
of said first water softener and said second water softener;

said hardness detection device detects the hardness of treated water
sampled by said sampling mechanism.

18. A water softening device as described in Claim 15, further comprising:

a non-regenerating polisher is provided downstream of said first water
softener and said second water softener with respect to flow of raw water through
said water softening device.

19. A water softening device as described in Claim 17, further comprising:

a non-regenerating polisher is provided downstream of said first water
softener and said second water softener with respect to flow of raw water through
said water softening device.